

Assessing climate change potentials in native plants Sierra National Forest

2010 Accomplishments

This project was initiated to assess of native plant climate performance across elevations on the Sierra National Forest. The annual plant, *Mimulus laciniatus* (Figure 1), is endemic to the Sierra Nevada, growing between 760 – 3,270 m. *M. laciniatus* has been sampled across the greatest climate gradient within the species range from each of 24 populations. Adaptations to climate were examined at experimental climate gardens (Figure 2) under partnership with the US Forest Service, the University of California, Davis, and private landowners. All common garden experiments at low-, mid-, and high-elevation sites were completed with the help of UC Davis student assistants and volunteers. Data analyses on population-based climate project is in nearly finished. Molecular genetic data collection of gene flow, diversity, and differentiation from more than 1,000 plants across the species range is finished and the results will be published and submitted provided at a later date.



Figure 2. High-elevation field experiment to assess elevation-based climate adaptations.



Figure 1. Cut-leaved monkeyflower, a Sierra Nevada endemic species.

Year Awarded: 2010

Expenditures: FY10 funding, \$7,000

Partners/Contractors/Coop: University of California, Davis; private landowners, volunteers



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